Date: Sat,  4 Jun 94 04:30:31 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #145
To: Ham-Space

Ham-Space Digest            Sat,  4 Jun 94       Volume 94 : Issue  145

Today's Topics:



Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".



---

Date: Fri, 3 Jun 1994 19:13:41 GMT
From: swrinde!gatech!howland.reston.ans.net!math.ohio-state.edu!
cyber2.cyberstore.ca!nntp.cs.ubc.ca!unixg.ubc.ca!news.mic.ucla.edu!
library.ucla.edu!csulb.edu!csus.edu!netcom.@@ihnp4.ucsd.edu
Subject: NAVSPASUR listeners?
To: ham-space@ucsd.edu

Over the past three or four years there has been occasional discussion in the Compuserve satellite watchers' group concerning reception of U.S. Navy space surveillance system (NAVSPASUR) VHF (ca. 219 MHZ) signals as they are reflected by satellites passing through the system's fan beams.  The CW beams, radiated from the primary transmitter at Lake Kickapoo TX and two secondary sites in Arizona and Alabama, are narrow in the north-south direction and wide east-west.  Satellites crossing a beam cause a "ping" which can be analyzed for angle-of-arrival and doppler to gain information about the satellite's orbital parameters.  As the system is used by the Navy, several receiver sites are involved and the total amount of angle-of-arrival data (I don't think they use the doppler) is sufficient to determine the orbit

completely.  The most advanced of the Compuserve observers uses time-of-crossing, doppler, and coarse angle-of-arrival at a single site to partially determine the orbit, or to generate differential corrections to orbital elements previously determined.

The discussion on CIS has been useful to me since I'm doing a study of relatively cheap ways to do space surveillance, and I'd like to ask the wider world of the Net if anyone else is doing "unofficial" NAVSPASUR listening.  If so, what kind of equipment and orbit determination algorithms are being used?  Related techniques, such as use of the signals from powerful TV and FM radio stations, ATC radars, etc. would also be of interest.

---

Date: Fri, 3 Jun 1994 18:50:48 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!europa.eng.gtefsd.com!news.umbc.edu!eff!news.duke.edu!zombie.ncsc.mil!blackbird.afit.af.mil!sd2!johnsotc@network.ucsd.edu
Subject: Orbital Elements for the Moon?
To: ham-space@ucsd.edu

In article <2sik3c$6ko@crchh7b0.bnr.ca>, debaker@bnr.ca (David Baker) writes:
|>
|> Greetings,
|>
|> I was just wondering if there are orbital elements for the moon
|> that could be entered into a satellite tracking program.  Two line
|> NASA format would be best.  While we're at it, how about elements
|> for the sun?
|>
|> Thanks,
|> +---------------------------------------------------------------------+
|> | David E. Baker      Internet: debaker@bnr.ca (Richardson, TX, USA) |
|> | Callsign: AB5PI         Amateur Packet: AB5PI@N5AUX.#DFW.TX.USA.NA |
|> | My opinions do not necessarily reflect the opinions of my employer |
|> +---------------------------------------------------------------------+

The following is from a previous article written on the subject:

Sender: news@freenet.carleton.ca
Reply-To: ae517@FreeNet.Carleton.CA (Russ Renaud)
Organization: The National Capital FreeNet, Ottawa, Ontario, Canada
References: <2d2e8a6b@sm0nbj.ct.se>
Date: Tue, 11 Jan 1994 13:56:37 GMT
Lines: 29

```
MOON
1 0002            93360.0000000  0.0000000           00000-0    00011
2 0002   22.4297 346.9573 .040813 180.3337 265.5319    0.035749304251
```

I can not vouch for the long-term accuracy of these keps, as I merely pulled them off the local packet bbs. The two times I have plugged them into to mactrak, it seem to work, ie the software predicted that the moon was visible, and lo and behold, that great orb in the sky was actually there!

de Russ
VA3RR/AA8LU
in beautiful downtown Ottawa

*** I survived the Beijing flu!! ***

--

---

Date: Fri, 3 Jun 1994 12:24:24 GMT
From: news.crd.ge.com!crd.ge.com!mallick@uunet.uu.net
Subject: Oscar antennas?
To: ham-space@ucsd.edu

I used the HyGain Oscar-Link antennas. They seem pretty well constructed and I made a bunch of contacts through AO-13 running my TenTec 2510 barefoot (10 watts out).
--

.... ..  .... ..  .... ..  .... ..  .... ..  .... ..
John A. Mallick WA1HNL  E-mail: mallick@crd.ge.com
GE Corporate Research and Development  Phone: (518)-387-7667 (W)
Schenectady, NY 12301  FAX: (518)-387-6560 (W)
.... ..  .... ..  .... ..  .... ..  .... ..  .... ..


"Work like hell. Tell everyone everything you know. Close a deal with a handshake. And have fun." --- "Doc" Edgerton

---

Date: 3 Jun 1994 11:35:02 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: What SAT's can I hear on a Scanner ?
To: ham-space@ucsd.edu

I just rec'd my no-code Tech license and am very interested in the AMSAT's.

I use STS Plus tracking software and have been tracking the AO-21 bird and can hear it fairly well with a PRO 2006 and a RS Discone.  I am becoming familiar with the procedures to operate with and am blown away by all this cool stuff.

I also have a shortwave with usb/lsb.

My main question is what other SAT's can i hear with my equipment now?  I really would like to know what is out there before I choose my equipment

Thanks in Advance.    Brad

---

Date: 3 Jun 94 21:54:27 GMT
From: sdd.hp.com!hpscit.sc.hp.com!icon!greg@hplabs.hpl.hp.com
Subject: What SAT's can I hear on a Scanner ?
To: ham-space@ucsd.edu

Well, let's see...

AO-27 downlink is on 436.800, FM
RS-10 is on 29.360-400 USB
RS-12 is on 29.410-450 USB

The RS-10 & 12 beacons are 3khz down from the lower edge.

I doubt you'd be able to hear AO-13 or FO-20 (VHF/UHF + SSB + they're weak)

Enjoy!

Greg  KD6KGW

---

End of Ham-Space Digest V94 #145
******************************